11.   (Once Amended) A method of automatically configuring virtual private networks over a shared MPLS network comprising:

creating a link between a private network router and a shared network router,

assigning a VPN identifier to said shared network router;

assigning said VPN identifier to at least one other shared network router; and

creating at least two label switched paths between said shared network router and said at least one other shared network router, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path.

12. (Once Amended) The method of configuring virtual private networks according to Claim 11 wherein:

said at least one other shared network router includes a plurality of shared network routers; and

said creating at least two label switched paths includes creating at least two unidirectional point-to-point label switched paths between said shared network routers.

REMARKS

The Office Action dated April11, 2002 has been considered.

Independent claims 1, 7 and 11 were further amended with subject matter of claim 6. Claims 5 and 6 were canceled since their subject matter is now redundant.

Claim 11 was further amended to omit the determining step, thereby obviating the sole grounds for imposing a restriction. Claim 12 was further amended to correct minor errors.

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Claims 1-4, 7-10 and 15-18 were rejected under 35 U.S.C. 102(e) as being anticipated by Rekhter et al (US 6,339,595). In view of the amendment of independent claims 1and 7 with that of claim 6, this rejection is no longer tenable and warrants withdrawal.

Claims 5 and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter et al (US 6,339,595). This rejection is respectfully traversed.

The Office Action concedes that Rekhter is silent regarding label switching paths which comprise multi point-to-point paths or multi point-to-multi point paths. Nevertheless, the Office Action finds the inclusion of such to be obvious to one of ordinary skill in the art at the time the invention was made to thereby provide the communication system of Rekhter with the ability to transfer data packets utilizing unaccused as well as multicast transmissions. This contention is traversed on the basis that it fails to rely on any prior art teaching to support the contention.

Since Rekhter is silent regarding label switching paths which comprise multi point-to-point paths or multi point-to-multi point paths, the Office Action fails to show all the claim limitations being taught or suggested by the prior art, namely, the claim language:

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"said label switched paths comprising at least two multipoint-

to-point paths and further comprising at least one multi-point

to multi-point path."

Such a deficiency is contrary to the mandate of MPEP 2143.03 for establishing a

prima facie basis for an obviousness rejection:

2143.03 All Claim Limitations Must Be Taught or Suggested

> To establish *prima facie* obviousness of a claimed invention,
> all the claim limitations must be taught or suggested by the
> prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA
> 1974). "All words in a claim must be considered in judging
> the patentability of that claim against the prior art." *In re
> Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA
> 1970). If an independent claim is nonobvious under <u>35
> U.S.C. 103</u>, then any claim depending therefrom is
> nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596
> (Fed. Cir. 1988).

As a consequence, the Office Action fails to satisfy the burden imposed on the

Examiner to establish a *prima facie* case of obviousness. MPEP 2142 provides:

ESTABLISHING A *PRIMA FACIE* CASE OF OBVIOUSNESS

> To establish a *prima facie* case of obviousness, three basic
> criteria must be met. First, there must be some suggestion or
> motivation, either in the references themselves or in the
> knowledge generally available to one of ordinary skill in the
> art, to modify the reference or to combine reference
> teachings. Second, there must be a reasonable expectation
> of success. Finally, the prior art reference (or references
> when combined) must teach or suggest all the claim
> limitations. The teaching or suggestion to make the claimed
> combination and the reasonable expectation of success

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must both be found in the prior art, and not based on applicant"s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See <u>MPEP § 2143</u> - <u>§ 2143.03</u> for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See <u>MPEP § 2144</u> - <u>§ 2144.09</u> for examples of reasoning supporting obviousness rejections.

In *In re Kotzab*, the claims were drawn to an injection molding method using a single temperature sensor to control a plurality of flow control valves. The primary reference disclosed a multizone device having multiple sensors, each of which controlled an associated flow control valve, and also taught that one *system* may be used to control a number of valves. The court found that there was insufficient evidence to show that one *system* was the same as one *sensor*. While the control of multiple valves by a single sensor rather than by multiple sensors was a "technologically simple concept," there was no finding "as to the specific understanding or principle within the knowledge of the skilled artisan" that would have provided the motivation to use a single sensor as the system to control more than one valve. 217 F.3d at 1371, 55 USPQ2d at 1318.

Pages 5 and 6 of the present application provides the following discussion regarding Multipoint-to-point paths and Multipoint-to Multipoint paths:

Two types of LSPs may be used to interconnect PNADs 10 of a VPN: Multipoint-to-point   LSPs   and

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Multipoint-to-multipoint LSPs.   Each PNAD 10 has a multipoint-to-point LSP directed to it. It is used by all other PNADs 10 for unicast transmissions. All PNADs 10 of a VPN subnet may also be interconnected using a bi-directional, multipoint-to-multipoint LSP. This could be used for sending multicast datagrams. Because this LSP is bi-directional and multi-point-to-multi-point, one such LSP could service an entire VPN subnet, although it is conceivable that multiple LSPs of this type could be employed. Those skilled in the art will recognize that a multipoint-to-multipoint LSP is not strictly required, and that other techniques for multicasting datagrams are available. For example, the point-to-multi-point LSPs from each PNAD 10 in a VPN to all other PNADs 10 in the VPN could be employed for the same purpose. Multicast traffic may include Hello packets, Link State Advertisements (LSA), Address Resolution Protocol (ARP), etc

It is therefore evident that withdrawal of the claim rejection is warranted.

Dated: July 9, 2002   Respectfully submitted,
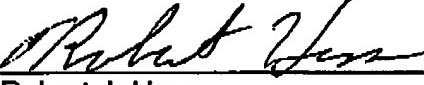
Robert J. Hess
Reg. No. 32,139

GIBBONS, DEL DEO, DOLAN
 GRIFFINGER & VECCHIONE
750 Lexington Avenue – 21 Fl
New York, NY 10022
Tel (212) 486-4000
Fax (212) 486-4007

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MARKED-UP VERSION OF AMENDED CLAIMS

1. (Once Amended) A virtual private network which enables private communications, over a shared MPLS network, between at least two private networks comprising:

a first router coupled to the shared MPLS network and configured to dynamically distribute first router VPN information across the shared MPLS network, wherein said first router VPN information includes a VPN identifier which is assigned to said first router;

a second router coupled to the shared MPLS network and configured to dynamically distribute second router VPN information across the shared MPLS network; wherein said second router VPN information includes a VPN identifier which is assigned to said second router;

wherein said first and second routers are also configured to establish a plurality of label switched paths therebetween, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path; and,

wherein said VPN identifier assigned to said first router is the same as said VPN identifier assigned to said second router.

7. (Once Amended) A virtual private network which enables private communication, over a shared MPLS network, between at least two actual networks comprising:

first router means coupled to the shared MPLS network for dynamically distributing first router means VPN information across the shared MPLS network,

wherein said first router means VPN information includes a VPN identifier which is assigned to said first router means;

a second router means coupled to the shared MPLS network for dynamically distributing second router means VPN information across the shared MPLS network; wherein said second router means VPN information includes a VPN identifier which is assigned to said second router;

wherein said first and second router means are also configured to establish a plurality of label switched paths therebetween, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path; and,

wherein said VPN identifier assigned to said first router is the same as said VPN identifier assigned to said second router.

11.   (Once Amended) A method of automatically configuring virtual private networks over a shared MPLS network comprising:

creating a link between a private network router and a shared network router,

assigning a VPN identifier to said shared network router;

assigning said VPN identifier to at least one other shared network router; and

[determining all shared network routers which are assigned said VPN identifier;]

creating at least two label switched paths between said shared network router and said at least one other shared network router, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path.

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12. (Once Amended) The method of configuring virtual private networks according to Claim [10] 11 wherein:

said at least one other shared network router includes a plurality of shared network routers; and

said creating at least two label switched paths includes creating at least two unidirectional point-to-point label switched [path] paths between said shared network routers. [, and]

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